

CHEMISTRY

High Purity Crystals Grown From Solution

➤ AN EFFICIENT, reproducible method for growing large single crystals from solution has been developed by the National Bureau of Standards, U.S. Department of Commerce.

Crystals grown by this method are homogeneous in physical structure and exceptionally pure. They may be used for reference standards in chemical reactions, for calibrating instruments, and as specimens for the precise measurement of physical properties of solid state materials.

For the growth of crystals from solution the solution must remain supersaturated even though the dissolved solute is removed as it is deposited on the crystal faces. The crystal-growing bath must be protected from thermal and mechanical shock as well as from contamination and extraneous crystal growth. Equipment and procedures meeting these requirements were designed by J. L. Torgesen, A. T. Horton and C. P. Saylor of the Bureau.

• Science News Letter, 83:271 April 27, 1963

CHEMISTRY

New Synthetic Rubber Resistant to Ozone

➤ A NEW SYNTHETIC RUBBER 100 times more weather resistant than present general-purpose synthetic rubbers is expected to be used widely in future products, a rubber company scientist predicted.

The new substance, ethylene-propylene rubber or EPR, is made from materials in abundant supply from the petroleum industry, said Dr. Robert J. Kelly, senior research scientist at United States Rubber Company's Research Center, Wayne, N. J.

Dr. Kelly reported on the structure and properties of the new ethylene-propylene material before the rubber and plastics group at the American Chemical Society in Detroit.

EPR's major advantage is its resistance to weathering and particularly to ozone. Lengthy outdoor tests failed to develop even tiny cracks in the material, Dr. Kelly reported.

• Science News Letter, 83:271 April 27, 1963

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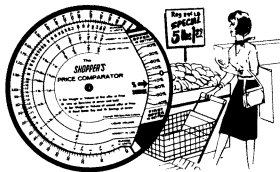
A new chemical compound, *2-aminobutane*, prevents decay in a wide variety of perishables: oranges, lemons, apples, bananas, cut flowers and bulbs.

Bouncing sound waves off the *heart* provides a fast and painless way of diagnosing a serious heart disorder.

Molybdenum and columbium are promising *metals* for use in spacecraft and in high-performance aircraft structures, because they are super-strong and highly resistant to heat.

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